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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LE, THIEN MINH

ART UNIT PAPER NUMBER

2876

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/728,940	Applicant(s) BELWAY ET AL.	
	Examiner Thien M. Le	Art Unit 2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/5/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

The information disclosure statement filed on 3/5/2004 has been entered.

Claims 1-36 are presented for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 2876

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pillon (Pillon - 4,013,192) in view of Pearson et al. (Pearson et al. - 6,561,377 ; herein referred to as Pearson).

Pillon discloses a pharmaceutical pill counter incorporating a rotating pill bowl and a stationary guide that cooperatively guide pills in single file to an exposed slide having a main portion that feeds prescription and stock bottle slide portions under the control of a gate. Each slide portion has a downwardly inclined orientation with an exposed channel shape to guide the pills downwardly while permitting the slide portions to be easily cleaned. The slide is preferably integrally defined by an upper housing portion of molded plastic and is located at a corner of the housing so that the prescription and stock bottle slide portions direct the pills to opposite sides of the corner. The gate includes a lower end pivotally mounted at a lower extremity of a common junction of the slide portions and an upper end that is moved along an upper extremity of this junction to direct the pills in the proper direction. The gate initially directs the pills to the prescription bottle slide portion until a photoelectric sensor along the main slide portion has sensed a programmed number of pills and then directs the remaining pills to the stock bottle slide portion. The rotating bowl and stationary guide are preferably molded from plastic and the guide includes a central hole that receives a removable upper end of a bowl drive shaft. A portion of the guide projects into the main slide

Art Unit: 2876

portion to prevent rotation of the guide as the drive shaft rotates the bowl. A removable plastic shield is positioned over the slide and includes lower deflector portions that control the trajectory of pills as they leave the slide.

Referring to figure 1 of the drawings, Pillon discloses a "pill counter embodying indicated by reference numeral 10 and includes a housing 12 having an upper molded plastic portion 14, a lower molded plastic portion 16, and an intermediate support plate 18 located between downwardly and upwardly opening configurations of the upper and lower housing portions. Peripheral flanges 20 of the housing portions 14 and 16 and the support plate 18 are secured to each other by a plurality of spaced fasteners 22 (see FIG. 3 also). The upper housing portion 14 defines a bowl depression 24 that receives a rotatable pill bowl 26. Bowl 26 is preferably molded from plastic, and has a circular configuration as viewed in figure 2".

Referring to figure 2, Pillon discloses that the "pill bowl 26 includes a lower portion 54 that receives pills from a stock bottle, an annular ledge 56 above the lower portion, and an upper inclined edge 58 defining the periphery of the bowl. The pill guide 45 includes a tongue or stop portion 60 the projects into a slide 62 at the upper end of a main portion 64 of the slide. The tongue portion 60 is engageable with a stop edge 61 at the upper inlet end of the slide 62 to guide pills into the slide and to prevent rotation of the guide 45 during clockwise rotation of the bowl (as viewed in FIG. 2). The main portion 64 of the slide feeds prescription and stock bottle slide portions 66 and 68 that have a common junction 70 with the main portion. A gate 72 has a lower

Art Unit: 2876

end that is pivotally supported by a pin 74 at the lower extremity of the slide portion junction 70 and an upper end that moves along the upper extremity of the junction so that the gate directs the pills to either slide portion 66 or 68 depending on whether the gate is in its solid or phantom line position of FIG. 2. A solenoid 76 shown by hidden lines in FIG. 2 moves the gate 72 between its two positions”.

Referring to FIGS. 2 and 3, Pillon discloses that “a panel 108 of the counter has numerical buttons that are depressed to program suitable electric circuitry of the machine in order to count out a predetermined number of pills into a prescription bottle. This predetermined number of pills is indicated by a visually observable readout 110 adjacent panel 108. A count button C is then depressed to energize the drive assembly 28, FIG. 1, and thereby begin rotation of bowl 26 to provide the single file progression of the pills to the slide 62 in the manner previously described. A photoelectric sensor 112, FIGS. 2 and 3, senses and counts the pills upon passage through the main slide portion 64 above the gate 72. At this time, the gate 72 will be in its solid line position of FIG. 2 so that the pills will be directed toward the prescription bottle slide portion 66 and received by a prescription bottle. After the programmed number of pills have been dispensed into the prescription bottle, the electrical circuitry of the counter causes its solenoid 76, FIG. 2, to pivot the gate 72 from its solid line position to its phantom line position so that the remaining pills entering the slide will be directed toward the stock bottle slide portion 68 and thereby returned to the stock bottle position below this slide portion. At any time during the counting cycle, a stop button S of the panel 108 may be depressed to terminate the operation of the counter. Also, it is

preferable for the electrical sensing system to terminate the operation of the counter after a predetermined period of time, such as 25 seconds, has past since the photoelectric sensor last sensed a pill passing through the slide. A photoelectric sensing system of this general type is disclosed by U.S. Pat. No. 3,837,139".

Pillon further discloses that "the bowl 26 rotates clockwise in the direction shown by arrow 78 of FIG. 2 to commence counting of pills received within the lower bowl portion 54. The projecting guide portion 60 is engaged with one side of the main slide portion 64 during the clockwise bowl rotation to maintain pill guide 45 in a stationary condition against rotation. Spiraling ribs 80 of the lower bowl portion and a spiraling guide portion 82 that slidably engages the ribs 80 cooperate to guide the pills received within the lower bowl portion upwardly to the intermediate annular ledge 56. A limiting guide portion 83, FIG. 2, also engages the spiraling ribs 80 of the lower bowl portion and cooperates with the guide portion 82 to limit the movement of pills upwardly onto ledge 56. The pills are moved clockwise between guide portions 82 and 83 upwardly onto the annular ledge 56 and are then moved clockwise past the stationary spiraling guide portions 82 as the bowl continues to rotate. After moving clockwise past guide portion 82, the inclined configuration of the upper bowl edge 58 and the cooperable bias of gravity prevent the pills from moving other than in a single file progression as the bowl rotates clockwise and moves the pills toward another spiraling portion 82 of pill guide 45. Spiraling ribs 86 on the inclined bowl edge 58 and the stationary guide portion 84 cooperate to move the pills upwardly in a single file progression toward the

upper end of the main slide portion 64. Only one pill at a time is thus received by the slide 62 so that counting of the pills being dispensed may take place”.

Regarding claim 1, the system as taught by Pillon discloses all limitations of this claim; excepts that the claim differs in calling for a means for altering the angular velocity of the bowl.

However, this claimed limitation is not new. Reference to Pearson is cited as evidence showing the conventionality of the claimed limitation.

Specifically, Pearson discloses a pill counting system that includes a “micro-controller 70 will utilize to operate pill counter 1 are shown in FIG. 13. In step 100, the program will query the user to enter the size of the pills being counted. Step 101 requests the number of pill bottles or containers to be filled (or the number on the pill container conveyor) while step 102 requests the number of pills to be counted into each container. Step 104 checks that the number of pills entered by the user (“NUM”) is a positive number and step 105 checks that the number of containers to be filled (“TS”) is a positive number. If either of these conditions are not met, the program will return to step 100 and again ask for the number of pills and containers. Step 106 represents the start of the main program loop. In step 107, the blower 28 will be set to a predetermined speed depending on the pill size. Naturally, the larger the pill being counted, the higher the blower speed will be to provide sufficient vacuum force. In terms of blower 28 described above, large pills will utilize the highest available blower speed while the blower speed for the smaller pills may be proportionally reduced. For example, medium pills may utilize a blower speed of approximately 70% of the highest

Art Unit: 2876

speed, small pills approximately 60%, and extra small pills approximately 50%. Next, step 108 opens feed gate 50 for a predetermined time based upon the number of pills the user wishes to deposit on pill shelf 6. Step 109 then determines whether the number of pills advanced on the container conveyor ("X") is greater than one and advances to the next pill container if the condition is true. Step 110 activates motor 30 in order to begin the rotation of vacuum drum 10 while the output of sensor 37 is read in step 111 to determine if the output is high or one (i.e., a pill has been detected). If a pill is detected, the program branches to "Do Math" step 116, where the number of pills counted by sensor 37 ("XX") is incremented by one and where the Air Drum Switch count is set to zero in step 117. Step 118 determines whether XX is equal to the number of pills which should be counted into each container ("NUM"). If XX is not equal to NUM, the program proceeds to 119 and then back to step 111 in order to await detection of another pill by sensor 37. If XX is equal to NUM in step 118, the program branches to step 120 to determine whether the desired number ("TS") of containers have been filled. If this condition is not true, then TS is decremented by one in step 121a and the program is returned to main loop start point 106 by step 121b, where a new container will be advanced (step 109) and the counting process begun again for that container. If the condition at step 120 is true, the container conveyor advancing the pill containers will have its motor reversed until it returns to its home position (step 122) while motor will reverse direction to rotate vacuum drum 10 backwards by a distance equal to four pill apertures (step 123) and step 124 then stops the movement of vacuum drum 10 and turns blower 28 off. It will be understood that

the purpose of steps 123 and 124 (at the time no more containers are to be filled). is to move any pills near pill separator 35 back away from the separator before blower 28 is turned off. In this manner, no additional pills will fall onto pill separator 35 when the vacuum force within vacuum drum 10 is released. When vacuum drum 10 has been turned off, step 125 will return the program to the main screen for a new set of instructions from the user".

In col. 8-9, Pearson discloses that the microcontroller can be automatically adjusting the speeds of the system when counting pills of different sizes.

It would have been obvious to provide the method of controlling the speeds of the counter in the system as taught by Pillon. The modification ensures the optimum operation of the system when counting pills of different sizes in the manner as suggested by Pearson; and thus, would have been well within the skill levels and expectations of an ordinary skilled artisan.

Regarding claims 2-3, see the discussions regarding above regarding the micro-controller 70. Also see col. 7-9 of Pearson for the functions of the micro-controller 70.

Regarding claim 4, Pearson discloses the use of a switch 78 allows micro-controller 70 to maintain a count of how many rotations vacuum drum 10 makes. Switch 79 is a home switch for pill container conveyor 90. As discussed below, when the last pill container is filled, container conveyor motor 92 is reversed and container conveyor moves backwards until switch 79 is triggered and stops motor 92. Switch 79 ensures that container conveyor will stop at its calibrated home position. Other elements shown in FIG. 14 include back light power supply 80 for LCD 74 and voltage

Art Unit: 2876

trim 81 for controlling the brightness of LCD 74. Accordingly, the controller allows the motor to move in one direction for one counting operation; reversing the motor rotating direction for home-position; and allowing the motor to rotate in the first direction for the next count operation; and thus would meet all limitations set forth in this claim.

Regarding claim 5, see the discussions above regarding the steps of altering the speed for counting pills of different sizes.

Regarding claim 7, the sizes of the pills is considered as the claimed characteristics of the pills. Further, Pearson discloses the use of optical sensor for sensing the color of the pills. It would have been obvious to incorporate this limitation in the system as taught by Pillon. The modification allows the system to be recognized by color system that the correct type of pills is being counted.

Regarding claims 8-9, see the descriptions of the operation of the micro-controller of Pearson; and also as has been discussed above regarding claim 1.

Regarding claim 10-13, the combined system as taught by Pillon/Pearson, as has been discussed above would count the pills according to the physical aspects such as sizes and dimensions; and thus would embrace all limitations set forth in these claims.

Regarding claim 14, see the descriptions of the spiral guide ramp as taught by Pillon; and as has been discussed above regarding claim 1.

Regarding claims 15-16, see the discussions regarding claims 1 and claim 7.

Regarding claims 17-36, the claims recite various combinations of the limitations that have been discussed above; and thus would be embraced by the combined teachings of Pillon and Pearson.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thien M. Le whose telephone number is (571) 272-2396. The examiner can normally be reached on Monday - Friday from 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Le, Thien Minh
Primary Examiner
Art Unit 2876
April 13, 2005**